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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 846,375	05 02 2001	Craig S. Rendahl	114292.1561	3929

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EXAMINER

LUU, THANH X

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/846,375

Applicant(s)

RENDAHL ET AL

Examiner

Thanh X Luu

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 05 February 2003 and 10 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 2-4, 6-18 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 2-4, 6-18 and 21-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 05 February 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11 6) ☐ Other.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 5, 2003 has been entered.

Claims 2-4, 6-18 and 21-27 are currently pending.

Drawings

2. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on February 5, 2003 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Claim Objections

3. Claims 12 and 21 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The language of claims 12 and 21 do not further limit the independent claim because "a laser beam source" is broader than "a modulated laser beam source."

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-4, 6-14, 16-18, 21-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over McConnell et al. in view of the publication of Doemens et al. (EP 1048961).

Regarding claims 2-4, 8, 9, 12, 13, 16, 21, 22, 24 and 26, McConnell et al. disclose (see Figure 3 and column 4, lines 20-40) an apparatus and method for measuring a speed or acceleration of a vehicle traveling on a vehicle path, comprising: a first radiation source or means (on beacon) that emits radiation arranged at a first side of the vehicle path; a first reflector (1) arranged on a second, opposite side of the vehicle path from the first radiation source that reflects radiation emitted from the first radiation source back towards the first side of the vehicle path; a first detector (on beacon; not shown, see column 4, lines 20-40) arranged at the first side of the vehicle path that receives the reflected radiation from the first reflector and detects a presence or absence of the reflected radiation; a second radiation source (on beacon) that emits radiation arranged at the first side of the vehicle path; a second reflector (2) arranged on the second, opposite side of the vehicle path from the second radiation source that reflects emitted radiation from the second radiation source back towards the first side of the vehicle path; a second detector (on beacon; not shown) arranged at the first side of

the vehicle path that receives the reflected radiation from the second reflector and detects a presence or absence of the reflected radiation; and a controller (inherent) connected to the first and second detectors that calculates the speed of the vehicle in response the first and second detectors (see column 4, lines 20-40, "velocity estimate"). That is, since a velocity is estimated in McConnell et al. a controller is inherent in the apparatus or method. McConnell et al. also disclose (see Figure 4 and column 4, lines 20-40) "the system has two emitter/detector pairs (not shown)" and the pairs supported on a bar unit or permanent installation on a side of the path. McConnell et al. further disclose the reflectors are retroreflective units and affixed into a permanent installation. McConnell et al. do not specifically disclose each of the radiation sources is a modulated laser beam source. Doemens et al. teach (see abstract) using a modulated laser source beam source to measure speed of a vehicle. Doemens et al. recognize that modulated laser beams allow for more accurate speed measurements by reducing interference from ambient radiation. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide modulated laser beam sources in the apparatus and method of McConnell et al. in view of Doemens et al. to improve speed detection.

Regarding claims 6, 7, 10, 11, 17 and 18, McConnell et al. in view of Doemens et al. disclose the claimed invention as set forth above. McConnell et al. do not specifically disclose a second bar unit or a plurality of permanent installations having a pair of sender/detector units spaced at a desired interval from the first bar unit. However, it has been held that mere duplication of parts requires only routine skill in the

art. *In re Harza* 124 USPQ 378. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a second bar unit in the apparatus of McConnell et al. in view of Doemens et al. to detect the speed of a vehicle at a different point along the vehicle path. Furthermore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to connect the bar units in order to improve stability of the units. Similarly, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a plurality of pairs of first and second reflectors.

Regarding claims 14 and 23, McConnell et al. and Doemens et al. do not specifically disclose the specific rate of modulation. However, the rate of modulation is a matter of design choice. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a rate of 20kHz-200kHz in the apparatus of McConnell et al. in view of Doemens et al. to reduce interference from ambient radiation and improve detection.

6. Claims 15, 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over McConnell et al. in view of the publication of Doemens et al. and further in view of Johnson et al. (U.S. Patent 5,812,249).

Regarding claims 15, 25 and 27, McConnell et al. in view of Doemens et al. disclose the claimed invention as set forth above. McConnell et al. and Doemens et al. do not specifically disclose a tilt sensor and calculating a power. Johnson et al. teach combining the speed sensor with a pollution sensor. Thus, Johnson et al. recognize that speed sensors can be combined with other sensors in order to provide more

thorough detection. Furthermore, tilt sensors are well known sensors in vehicles. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide additional sensors and calculate additional values in the apparatus of McConnell et al. in view of Doemens et al. and Johnson et al. to consolidate sensors and to provide a more complete detection of the vehicle.

Response to Arguments

7. Applicant's arguments filed February 5, 2003, with respect to Johnson et al. have been fully considered and are persuasive. The rejections over Johnson et al. with respect to a modulated laser beam have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Doemens et al.

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is (703) 305-0539. The examiner can normally be reached on Monday-Friday from 6:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta, can be reached on (703) 308-4852. The fax phone number for the organization where the application or proceeding is assigned is (703) 308-7722.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

txl
May 12, 2003

Thanh X. Luu
Patent Examiner